medication ordered, the patient's pre-existing drugs, and the patient's current and pre-existing medical condition. Optionally, further repetitions of warnings may be avoided once a warning has been received by the second module, and the warning has been acknowledged by the user of the second module through an input signal from the user interface.

[0008] In other embodiments, the Electronic Patient Monitoring system may provide the user with editable default values derived from standard dosing and administration guidelines obtained from the drug information database, and can alert the user to modifications that may be indicated based on the patient's current and pre-existing medical condition, allergies or other existing drugs. The Monitoring system preferably minimizes the amount of typed input required of a user.

[0009] In other embodiments, the first module or other modules of the Electronic Patient Monitoring system may also be used to identify ordered medications to be delivered to the patient's bedside (through the use of, for example, bar codes and readers or RFID tags and scanners), and verify that the appropriate medication and dosage are being prepared and delivered to the patient. In an embodiment, the first module may also interact either in a hard-wired or wireless fashion with a device that administers treatment, such as a solution/medication infusion pump. In the case of an infusion pump, the first module or another connected module may provide the pump with infusion settings such as flow rate or infusion pressure, and receive from it various state parameters such as, for example, the presence of air in the infusion line, the amount of solution remaining in an IV bag to which it is connected, or the pressure of fluid in the infusion line. If the parameters are found to be abnormal, the first module may be configured to respond by signaling the pump to halt infusion, alter the rate of infusion, and/or alert a health care provider or others of the abnormality, either directly through an alarm incorporated in the first module, or by transmission of an alarm to the second module. In a further embodiment, the first module may also be configured to communicate with various medical devices used to monitor a patient's condition, such as, for example, blood pressure monitors, ECG monitors, pulse oximetry monitors, temperature monitors, and the like. In some cases, the first module can be programmed to emit an alert to the patient or other persons if the monitored parameters fall outside a pre-determined range. In some embodiments, the first module can transmit a signal to a monitoring device to conduct an unscheduled measurement by the device. The first module may communicate with various health care providers at various locations, and in an embodiment may be able to notify the patient to whom it is assigned of an abnormality, and recommend corrective action through, for example an audible alert or recorded message.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. 1 is a schematic representation of an exemplary Electronic Patient Monitoring system, showing paths of communication among system components.

[0011] FIG. 2 is an illustration of a display screen on a health care provider's portable communications device, showing a list of patients whose information the provider can access.

[0012] FIG. 3 is an illustration of a display screen on a health care provider's portable communications device, showing devices associated with a particular patient, with

current data from the devices and one-touch access to some of the patient's medical information.

[0013] FIG. 4 is an illustration of a display screen on a health care provider's portable communications device, showing data entry fields for a prescription for a medication for use with an intravenous infusion pump.

[0014] FIG. 5 is an illustration of a display screen on a health care provider's portable communications device, showing a risk profile associated with an ordered medication, and a suggested course of action, as generated by the Monitoring.

[0015] FIG. 6 is an illustration of a display screen on a health care provider's portable communications device, showing a medication prescription ready for submission by the ordering provider.

[0016] FIG. 7 is an illustration of a display screen on a health care provider's portable communications device, showing how the Monitoring system can display confirmation to the ordering provider that the prescription has been transmitted to the pharmacist.

DETAILED DESCRIPTION

[0017] As shown in FIG. 1, components of the Electronic Patient Monitoring System may include one or more Monitoring Clients 1,4, each of which may be assigned and in physical proximity to an individual patient 2, and a more remote Monitoring Server 3 for the uploading of information from a number of Monitoring Clients 1,4 , and for downloading information and instructions from various sources to the Monitoring Clients 1,4. When in the patient's room, a health care provider can interact directly with a Monitoring Client 1 to obtain information about the patient 2 or to enter orders pertaining to the patient 2. Alternatively, providers at remote locations (e.g., doctor's office, nursing station 5, hospital pharmacy 6) may interact with an individual Monitoring Client 1 through a communications link with the Monitoring Server 3, or directly via a hospital local area network having each Monitoring Client 1,4 as a node.

[0018] In an embodiment, each Monitoring Client 1 is assigned to a specific patient 2, and can be a desk-based, portable or hand-held controller with display and user input capability. Preferably, it is portable and allows for efficient data viewing and data entry, such as a notebook PC, netbook PC, tablet PC, or even a 'smart-phone,' with or without touch screen capability. The designation of a particular Monitoring Client 1 to a particular patient 2 may be made using any of a number of methods, including (but not limited to) a unique patient identifier using a bar coded or RFID tag-embedded wrist band, for example. The Monitoring Client 1 may include one or more microprocessors to send and receive information relevant to the patient's care or condition. In some embodiments, the Monitoring Client 1 may be physically associated with a medical infusion pump 7 either permanently or detachably. This can be accomplished by a docking interface between the two devices. The Monitoring Client 1 can communicate with the pump 7 in a number of ways, including, for example, through electrical contacts in the docking interface, by means of an electrical connector, or wirelessly by means of transceivers on each device. The Monitoring Client 1 can also communicate with other databases in the facility 8, with databases external to the facility 9,10, and with health care providers via portable communications devices 11 (including, for example, physicians, nurses, and pharmacists). This can be accomplished